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Feasibility Transportation Study-South Shores, KY
Former Eastern Terminal
Coal to Liquid (CTL) and Coal to Gas (CTG)-Equipment

Presented to:	Prepared by:
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Site Location:

- South Shores, KY- Former Eastern Terminal

Equipment List: Based on SMG, each site will received (2) of each piece of equipment

Equipment list	**Weight**	**Length**	**Width**	**Height**
Syngas Cooler	500-800Tons	140-160 ft	15.5 ft	15.5
Quench Gasifier	270-290 Tons	63 ft	13’-2”	13’-2”
Air Separation Cold boxes		160-200 ft	10-12 ft	10-12 ft
Cylinder	200-400 tons	100 ft.		

Scope of Work:

EMR was contracted by SMG on June 3rd to investigate the feasibility of moving several large pieces from the closest barge and possible rail sidings to the selected site in the Commonwealth of Kentucky.

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The goal of this report to evaluate the following:

- Route Possibilities: encompassing the Dimensions and Weights of each piece, Grade issues, and overhead issues.
- Community Impacts
- Restrictions/Issues
- Preliminary Cost Analyze
- General Permit Requirements
- Agency Coordination
- Site Requirements

EMR has also included a summary and explanation of the EMR equipment that will be utilized in moving these pieces. The actually size and type of trailer, configurations equipment cannot not be determined until final weights and dimensions, permits, final site review, and final schedules are confirmed and set.

Disclaimer:
EMR has visited each selected site, ran several route possibilities, examined possible barge landing facilities under the time allowed and the information provide. This by no means is to be considered an exhaustive study, there are multiple unknown variables the will need to re-examined when final confirmation on the size of the pieces has been determined. EMR was told that the larger pieces would be broken into 3-4 smaller pieces but this information was not available prior to the deadline of his report. Due to sheer size of pieces and the topography of the site locations there are formidable restrictions and limitations.

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Evaluation of South Shores Site:

EMR visited the site and believes that of all the sites investigated this has the most promise as for as logistically providing transportation for the pieces based on their current weights and dimensions. The reason for this positive recommendation is that the site is positioned next to the Ohio River and a barge landing could be constructed and readily available. Obviously the site has been vacant for several years and the current infrastructure would need to be analyzed and recommendations made. It currently has several river cells that could assisted in docking any delivery barges to the site.

The river bank has an acceptable grade that would be very suitable for a roll on or roll off barge landing as well as provide a dock to offload lighter pieces. This off course will need to be engineered, permits acquired through the Corp of Engineers (COE), soundings completed on river bank and possible drudging to accommodate for draft of the barges to be able to reasonably be brought in close enough to bridge onto a landing.

At our site visit there was no accessibility to get inside the facility so evaluation of roads and routes, bridges, etc… could not be completed.

Conclusion/Feasibility/Budgetary Numbers:

As discussed in our general report on EMR capabilities and methodology on heavy haul and rigging, EMR has the capability to move these and larger pieces. The issue comes down to if the path from delivery point of a barge landing/rail siding to the final site has the capabilities of width, height, sustainable bridges to make it cost efficient and truly feasible.

Since the travel path is relative short 1-3 miles, construction of such a path is very possible and could be done fairly reasonable than trying to acquire routes and permits for other sites from the state to transport over the public roadways. As far as impact to the community it will be negligible at best due to the fact that all scope of work will be onsite and mostly out of sight from the public view.

Transportation cost for these pieces is estimated at 2.5 million dollars from landing to site. This would include construction of a landing, securing the barge, offloading each piece, transporting to site. It would not include following costs: Permits, building a suitable road to the site, jumping/plating/matting any structures, or offloading at the final destination. This estimated is based on today's dollars and does not include a percentage escalator based on a future target date.